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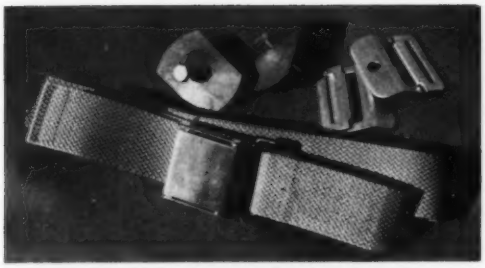

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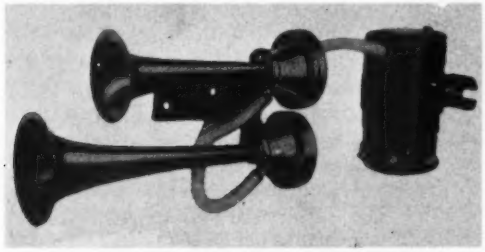

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INTERNATIONAL AUTOMOTIVE IMPORTS

POST OFFICE BOX 3096 - ALEXANDRIA, VIRGINIA

PCAer, "Mike" Fern's article in the June '60 issue of Pano has stimulated this symposium on Porsche brakes. We hope this collection of brake articles and ideas will prove interesting and valuable to all PCAers.

What Was The Cause

"Our Porsche had been driven all day on a tollway, through a very heavy rain, with only occasional light braking. At the time of the accident, there was a drizzle and the pavement was wet. Speed was no factor . . . car in front stopped suddenly, the Porsche's brakes were applied violently but there seemed no diminution of its movement." The writer of these facts suggested three possibilities which may have led to his downfall:

1. Impaired braking because of drums out of round.
2. Water in drums and on linings.
3. Linings not bearing upon their entire surface.

If the driver did not cause his downfall by locking up his wheels on the wet pavement, this being driver failure instead of brake failure, then the contributing factors to a brake failure could be the three that have been mentioned.

Here is how it acts. Assuming that the linings do not immediately make complete contact with the drums, due to out-of-roundness in the drums, and/or ill fitting of the shoes, as in Mr. Fern's case, and sudden application of the brake is made, a limited area of the lining is in heavy contact with the drums, but the areas not quite in contact have trapped water, which feeds between the tight areas in the same manner that oil in a rotating bearing is carried through the pressure area from oil, grooves, or from the unloaded side of a shaft.

Until this supply of water is exhausted, the brake is a lubricated bearing. It is usually somewhat worse than this, however. If you remove a drum you find a quantity of very fine dust that has worn from the linings and drum.

If the car has been driven in heavy rain, this dust has mixed with the water and formed a paste that is a better lubricant than water alone. This material rolls between the linings and drum in a lubricating film that is almost as effective as powdered mica, talc or graphite.

This effect is probably more pronounced in Porsche than in most other cars, because we have such large drums in relation to car weight. In normal braking, we do not apply as many pounds per square inch as in other cars. You have perhaps noticed that we must push real hard to slide all wheels. This is fine when everything is in proper condition, and is very desirable in preventing "brake fade," but with wet and ill fitting linings, we may not get an immediate "bite."

To prevent this condition, it is necessary that the drums be sufficiently round, and the linings be so well fitted, that these lubricating reservoirs do not exist and the brakes shall, on application, wipe themselves dry in one revolution of the wheels.

Clarence Rutbell
Central New York Region

Brake Treatment On A 356A

I had numerous out-of-round drums and, in spite of having springs mounted in the grooves of the drums, they squeaked. They were extremely sensitive when cold, acting like a runaway power brake until warmed. And for the final part of any stop—when the pressure was eased—I enjoyed the out-of-round Rhumba. Occasionally they veered and preventing brake drag was a lost cause.

Most of these ills have been corrected by the following treatment.

Removal of drums and brake shoes. Drilling 5 vent holes in each drum through the web and tangential to the braking surface. This allows brake dust to escape and promotes better contact between the shoes and the drum. Shoes should have two crosscuts about 9/64" wide and 5/64" deep, so located that the lining of each shoe is divided into approximately thirds. This had been done to my shoes, so I was saved that step.

One of the fellows had devised a fixture which enables the profile of the web of the shoe to be changed to match the latest specification, with the drilling of a couple of holes and following the pattern with a metal band saw. This changes the shoe from a rigid block, which distorts when heated, to a somewhat flexible arrangement which conforms to the curve of the drum. This is the idea behind Chrysler's (nasty word) Total Contact Brakes. We profiled the 8 shoes in about 1½ hours.

Meanwhile, while drilling the vent holes in the front drums, I discovered that they were far from being alike. The groove of one was 1/16"

PORSCHE BRAKE

less in width than the other. This caused the anti-squeak spring to ride high and it just barely cleared the wheel rim. The web of the drum of one was a full ⅛" thicker than the other. The overall width was slightly more than ⅛" different and the circle of the wheel bolts was not concentric with the braking surface by about .018". None of these things can cause a malfunction; but it shows that increased production has caused a lowering of matched parts selection in our little jewels. I'm glad the pistons and rods are not selected in the same manner that my brake drums were!

My pet theory about overcoming out-of-round Rhumba and inability to stay in adjustment, is that the shoes should float! The brakes are designed with this function in mind and again it is lack of quality control which negates this. To promote floating, I smoothed the ends or blades of the shoes where they engage in the slots of the adjusting bolts at one end and the hydraulic pistons at the other. I also cleaned the slots and in the case of the adjusting bolts where the slots are sloped, I took a narrow file and smoothed the bottom where the ends of the shoes bear. When reassembling I made sure the tongues and slots were well greased with a type of grease having a high melting point. Also, I applied grease lightly to the pads where the shoes contact the backing plate. When reassembled, it should be possible to move the shoes up and down at least ¼".

Before reassembling, the ends of the lining should be filed so that the bevel is not abrupt. This, I think, is a big help in stopping squeaks.

After reassembly and adjusting, there was a noticeable difference. No squeaks, the Rhumba almost completely gone, no veering and no drag with plenty of pedal. The cold and/or damp sensitivity was still there, but considerably reduced.

I drove the car for a couple of weeks and the cold sensitivity gradually returned. It became necessary to warm the brakes by running for a block or two in second gear while applying the brakes with the left foot. After this treatment normal traffic use would keep them warm enough, but the Rhumba stops were getting worse and I was definitely unhappy. I again removed the drums and with a strip of emery cloth removed the glaze on the surface of the linings. After reassembly, the first few stops were like having wet brakes and required considerable pedal pressure. But as the linings are "bedding in" the required pressure is diminishing.

This last treatment has apparently—and I use the word with trepidation—helped the cold and/or dampness sensitivity. I have only driven a few hundred miles with the linings in this condition and while the improvement is definite, I am reluctant to say that the patient is cured, at least at this early date.

Discussion with service representatives on the subject discloses that the factory is not too happy with this type lining and also that they are somewhat at the mercy of their suppliers in regard to the out-of-round drums, because of their small production and consequent curtailed orders. The faulty drums are probably due to lack of aging before being machined and also to the fact that aluminum distorts considerably when heated and does not fully return to its former dimension, particularly when under stress in this condition. This has been one of the big obstructions in making production aluminum engines.

So I guess that it is something we have to live with for the present. I can only say after the full treatment that with the shoes floating, the out-of-round Rhumba has become a more sedate waltz and removal of the glaze has at least temporarily allayed the cold sensitivity.

Bob Pierce
POC Newsletter

Linings And Drums

I have had some interesting experiences with the brakes on both a 1955 and a 1959 Porsche.

After reading a brake article in Pano, the first thing I did was to pull off all the wheels of the '58 and have a look. After 8,000 miles, all was in order; the front shoes were well seated, and the rear shoes on the rear wheels (used primarily for stopping when moving backward) were about ¾ seated. The shoes were labelled "Energit 999" in yellow paint, the same as on 356B cars.

After reading the article again and reminiscing a little, I came to these conclusions:

1. Energit 999 linings on cast iron are sensitive to humidity and tend to be "grabby" when damp.
2. The brake adjustment procedure is not quite properly described in the owner's manual.
3. The brass shoe adjusting nuts should be lightly greased.

KE SYMPOSIUM

4. Mike Fern's (June issue) left rear brake drum may not be cylindrical but instead slightly conical.

At this point, let's look at the operation of Porsche brake shoes, so that the reasons for later remarks may seem reasonable. The Porsche, like nearly all cars, uses leading shoes; that is, there is a self-wrapping or "servo" action when the shoes are pressed outward against the drums, so that the friction between shoe and drum actually helps force the shoe tighter against the drum. In this way, effective brake shoe forces can be generated with reasonable pedal force and travel. If there were no servo action, more force (to push the shoe against the drum) would have to be supplied by the hydraulic brake cylinder, and either a larger pedal force (too large for most people) or a longer pedal travel (dangerous because slight lining wear might increase pedal travel to the floorboards) would be required.

Unfortunately, the amount of servo action depends strongly on the friction between shoe and drum; the higher the friction, the more the shoes load themselves, and the brakes feel "grabby." The lower the friction, the less they load themselves, and the brakes seem slippery or the pedal "hard." Thus, when brakes "fade," the heat of braking has reduced the friction between shoe and drum (by melting or decomposition of the lining material) to such an extent that relatively little servo action occurs, thus compounding the problem.

A sure way around these servo variabilities is to use trailing shoes with no servo action, but add power assistance to provide the necessary force. Very few cars use such shoes, partly because the dependence of the system on the power assistance is too large for safety in case of power failure.

Most brake drums, including Porsche, have rubbing surfaces of cast iron because of the good wear-resistance of this material. Whenever the relative humidity exceeds about 50%, all unprotected iron surfaces begin to rust, and this includes brake drums. Rusty drums have much higher friction than clean ones. There are probably some effects of humidity upon brake lining materials and their responses to clean and rusty drums.

This brings us to Item No. 1: Energit 999 linings on cast iron surfaces are sensitive to humidity, and tend to be "grabby" when damp.

This was illustrated to me quite vividly one rainy day while returning from work. The first brake application of the afternoon came at 30 mph before a sharp bend on blacktop. I pressed the pedal and noticed virtually no deceleration, but instead I heard a "zzzzzzt" from the locked rear wheels as the Michelin X tires slid over the pavement. A second and third application produced the same effects. The sensation was that of being on ice. By this time, it was necessary to use a farmer's driveway as an escape road, and I was fortunate that no other cars were near. Subsequent brake applications were fairly normal.

With this in mind, I now always test the brakes before going very far on damp days. This is a good thing to do in any car.

I think Mike Fern's "banshee yowl" was merely the tires sliding over the pavement with the wheels locked or nearly locked because of the dampness effect mentioned above.

Porsche brake shoes, like most good brake shoes, are held in place by means of the return springs which keep the ends of the shoes in slots in the adjusting screw or the hydraulic piston. In this way the shoes can make contact over their full arc despite slight misalignments or changes in lining thickness due to wear. There is also a lightly spring-loaded locating pin near the middle of the shoe. Although the return springs are strong, there is often enough friction so that the shoes may not return completely "home" after the pedal is released. (Have you ever noticed that on a stationary car the free pedal travel is less for the second push on the pedal?) However, the vibration of bumpy roads will eventually shake the shoes "home," and on bumpy roads you will find the maximum free pedal travel.

Because the shoes are free to move in their slots, it is possible to have a shoe drag very lightly against the drum even when the brakes are properly adjusted, or even when they are much too loose!

In the owner's manual the instructions for adjusting the brakes tell you, in effect, to tighten a shoe against the drum by means of the adjusting nut until a light drag is felt. But the manual does not say who should measure this drag. Apparently, the manual does not mean Sophia Loren or Marilyn Monroe, but Charles Atlas. In other words, tighten the shoe against the drum until a pull of 50 pounds at the wheel rim is required to move the wheel. By this, you will surely have overcome the slight friction in the shoe supports and taken out all loose play. Then loosen the nut 4 or 6 teeth. The wheel should then rotate freely. If it sticks here or there, loosen the nut another tooth or two, so that the wheel rotates freely or at least coasts several revolutions. Loosen the other shoe on the wheel if necessary, to avoid confusion. The need to back off more than 7 teeth indicates possibly a warped drum, or loose or bad wheel bearings, or interference from the other shoe which you haven't adjusted yet. If next you push hard on the brake pedal and then go out and revolve the wheel again, you may notice that a very light drag has appeared, perhaps one or two pounds at the wheel rim. Pay no attention to it; it merely represents

a slight motion of the shoe in its slots and it will disappear if the wheel is properly jarred. Repeat this adjustment process for all 8 shoes, one at a time, and the result will be a genuine free pedal travel of about one inch.

If you prefer a greater free travel, back off a few more teeth on each nut. After adjusting the brakes, the car may, on braking, pull slightly to one side because the slight changes in contact pressure distribution between shoes and drums will not be exactly the same for all shoes. A few hard stops from 50 mph will soon seat the shoes uniformly and no pulling should then appear if the rest of the car is in order.

Whenever a wheel is removed, it's a good idea to grease the brass shoe adjusting nut. The threads are lubricated at the factory but the exterior of the nut may jam in its iron socket. A thin film of multi-purpose lithium-base chassis grease has a high softening temperature and affords good protection against rust here. Remove the appropriate shoe return spring, slide the shoe out of the way, and pull the nut from its socket. Also, check the flat tooth spring, to be sure that some zealot has not bent it so that it no longer touches the teeth on the adjusting nut. This spring would appreciate a film of grease, too. *Do not apply grease to the brake linings.*

R. H. Wentorf, Jr.
Hudson-Champlain Region

Squeals And Squeaks

It seems the characteristic brake squeal of the Porsche is still with us. Brake squeal, or any noise, starts as a vibration and is transmitted by the air to our ears. The question is, what and why? This writer is no engineer and did not design this squeaky device. But probably even the designer is not sure what exactly causes squeaking brakes, or they would not still be with us—the squeals, that is. We know this; Porsche brakes and brake linings are very good. The lining is very hard and good for over 100,000 miles (Chuck Binna's 104,000 on original linings), barring getting oil or hydraulic brake fluid on them, or extensive racing. It is just this hard lining that is partially responsible for the squeal. It is not soft as most American brake lining is. A soft lining can engage or press against the interior of the brake drum smoothly and progressively. The hard lining instead chatters and vibrates at a frequency that is not felt as chatter, but rather is heard as a noise. Also, it is usually heard as you come to a stop, and not at high speeds. There is not as much servo action on the front shoes at low speeds, so they vibrate. At high speeds, this servo action is much stronger and tends to force the shoes against the drums very strongly and they cannot vibrate, or cause noise. The fact that the brake drum is constructed of aluminum alloy does not help. It may also vibrate to a certain extent and act as a drum (musical) and amplify any noise created.

One other imported car (Borgward) had this same problem, only more so. It was horrible! They used cast iron brake drums with hard brake linings carried on aluminum shoes. In Germany, the non-export models used steel shoes and never had a noise problem.

But enough of theorizing and poking about in the dark—what can be done to eliminate or alleviate this noise? Several things can be done, some simple and cheap and some not so. First, every 3000 miles (when you rotate your tires) when the wheels are off (before adjusting the brakes) blow the drums out thoroughly with an air hose. This will get rid of the dust from the brake linings and accumulated road dust. This is sometimes very effective.

If you own a pre-1960 model, you can fit ordinary screen door springs around the outside of all four brake drums. This spring will tend to absorb the vibrations inside and in the drum. This is a common procedure on U. S. cars. If you still have noise and want to go further, you can remove the front brake drums and with a coarse file or rasp, bevel the ends of the brake linings. This will make for smoother contact with the brake drum. Later cars have cut out brake shoes which probably flex upon braking so as to give more even lining contact with the drum and cut down on noise.

About the last two things you can do are: 1. Remove all brake shoes and drums and have the drums turned and shoes ground to fit the drums. This can be quite effective. 2. Remove all brake shoes and have them rebonded with a softer American brake lining. It might grab and not last very long, but it should not squeak. However, don't bet on its not squealing.

If you have a 1960 or 1961 model, you can't put springs on the drums since they revised the drum design. Probably part of the design change was to give the drums more rigidity and cut down on drum vibration.

There is a service bulletin on eliminating noise with these brake drums. They must be removed from the car and sent to a machine shop to have a groove cut on the inside to receive a spring steel rod of wire 3 mm in diameter. This is supposed to do the job. It sounds expensive.

All in all, the Porsche is one of the few high performance cars with brakes that can be used all day without giving up or fading. You really cannot use them hard enough in road driving. Sometimes they squeal and pull right or left from just plain lack of firm usage. Excessive dampness or dryness will cause grabbing and noise which will go away with use and climate change.

Vern Racek
Rocky Mountain Region

Summary And What To Do

In discussing brakes with Porsche field service representatives, we have been told that it takes about 8,000 miles for the linings to bed in. We wonder what the owner of this $4,000 plus car is to do for the first 8,000 miles for good braking action.

1. Energit linings, be it 999 or 10999, are just too darn hard. It makes a good story to brag about how Porsches hardly ever have their brakes relined, but let's face it, those original linings glaze up fast. We would rather see Porsche use a softer lining, get more wear on linings but better braking might be our bonus with less squeal.

2. Porsche drums are prone to go out of round—aging or curing of new aluminum drums may be a factor in preventing this. New fins on 356B's are there for some cooling effect and to give drum stability against out of roundness. This has not achieved its goal, by any means.

Other factors causing drums to go out of round may be the hard linings generating extreme heat causing warpage, slapping of the emergency brake shoes tight against the drums when those drums are hot.

3. Porsche brake shoes are not specifically fitted to their individual drums at the factory. A man mounts brake shoes on backing plates and the shoes never see the drums until the drums are put on in further assembly. It would seem that with all the care the factory takes with other things, they miss the boat here. We go into this very important point again in the "What To Do" part of our summary.

4. The past instructions to change the profile of the web of 356 and 356A brake shoes and the new 356B type brake shoe patterns are obvious attempts to make up for point number 3 by weakening the shoe so it will flex and conform to the curve of the drum.

5. Squealing—Vern Racek has covered this subject nicely in his contribution to our symposium.

What To Do?

356 - 356A

When brake work is started on these models, it is best to start right from scratch and go through the following steps:

1. If you are going to replace linings, spend some time finding the best man in your area at bonding linings. Think seriously of going to Frenda or Mintex lining. A lot of rumored troubles with Frendo linings has been due to bad initial bonding work.

2. Find a good machinist with a quality lathe or universal grinding machine . . . and we do not mean the toy machinery frequently found in auto repair shops. The drums should be bored or ground, round, smooth and concentric, and the brake shoes should be set-up on a "face plate fixture" and the linings ground to the same radius as the inside of the drums, plus nothing, minus .010 inches. Turning the brake lining with lathe tools doesn't go very well, even with carbide tools, so a grinder, or grinding device on a lathe is quite necessary.

Good results have been obtained, when it comes to radius grinding linings to fit brake drums, with a Barrett Model B-75B, "True-ARC" Brake Shoe Grinder. Again, any part of this whole procedure we are doing is only as good as the man performing each operation.

Remember this about new brake diameter figures after brake drum work . . . the 2 front drums must have equal measurements and the same goes for the two rear drums.

3. Have your shoes profiled to the latest specs for these models.

4. Might not be a bad idea to install new return springs all around.

5. Lubricate your adjusting nuts.

6. Assemble lining and drum components and make adjustments of the brakes (see "Linings and Drum" article). Remember, if using Frendo, you must allow for expansion; so back off on the adjustment nuts some extra notches—factory recommends 3 to 4 extra notches with these linings.

7. Make frequent adjustment checks to insure good adjustment of your brakes.

8. Frequently blow out your drums to get rid of those bad actors, dust and dirt. With the many cooling holes in later type drums on both 356A and 356B models, dust and dirt can be real problems.

356B

You must be the judge of what you want to do here. We would, ourselves, on a new car immediately pull the drums, have then "miked" and checked for out of round. If out of round, see number 2 under 356 and 356A. Don't forget to have your linings radius ground to the drums in either case.

One last word on square brake drums. If you get a little brake pedal throbbing at low speeds, don't get excited—remember the Porsche brake system is a floating system. When you get marked throbbing under hard braking conditions, start looking for the machinist to turn your drums.

Bedding In New Linings

One method which has proven satisfactory is as follows:

drift to page 15

news from the regions

Thanks to Don Zinn and Springbrook Motors, the Chicago Region held a recent technical session. Paul Fontaine was the chief professor for the seventy odd people present. Ed Rinker, the MC at the Fourth Parade, is moving to Hollywood . . . hear this, Jack Case and the Los Angeles Region.

News comes of the Eastern Pennsylvania Region's Fourth Annual Banquet. A cocktail party sponsored by the Region started things off followed by an excellent meal. Then came the movie "Porsches Made By Hand," after which the members danced up a storm until the morning hours. Horace Ott and Jim Moyer received the applause of the PCAers for winning the 1960 Class E and F Championships of the Pennsylvania Hillclimb Association. The Region presented out-going President Charlie Beidler with a beautiful portrait, by Jim Moyer, of "Brown" in his #57 Coupe competing in a hillclimb. New President of the Region is staunch PCAer, Horace Ott.

Things in the Central New York Region are moving right along with the publishing of a newsletter under the guidance of Charlie Wolff.

The Potomac Region's annual event, The Color Rally, was another big success. Must be getting easier every year as 79 cars started and 78 finished.

Northeast Region planning and then doing more planning for what they say will be the "best damm Parade ever."

The OREGON REGION held a Concours d'Elegance in downtown Portland the last of September. Although we had to compete with a race up North (changed dates on us), we had a total of 58 entries.

The "Best of Show" award went to Ted Reich and his 1932 Rolls Royce Town Car.

We have a perpetual Club Trophy and it went to Porsche Perfectionist Pete McGill for his beautifully prepared 1957 Coupe.

This was the first concours held in the area since 1957, and there seemed to be quite an interest taken in it. We just might make it an annual affair.

National Officers Elected

Following the trend to exercise the franchise, PCAers exceeded all previous records . . . more than 50% of the entire membership cast a ballot for national officers.

As of the deadline, December 5th, ballots received showed a return as follows.

1128 Ballots for the Slate as presented.
4 Ballots showed "write-ins".
12 Ballots partially completed.
13 Ballots disqualified.

The new PCA Officers for 1961-1962 are:

President: Charles Beidler, E. Penna. Region
Vice-Pres.: Hayward Blake, Chicago Region
Secretary: Kenneth Button, Northeast Region
Treasurer: Philip Liautaud, Chicago Region

The next issue of Panorama will give a complete breakdown by states showing percentages of membership votes cast.

Wm. A. Andrews, Secty, PCA

PCAers at Central Florida's Tent on the infield at Daytona Speedway.

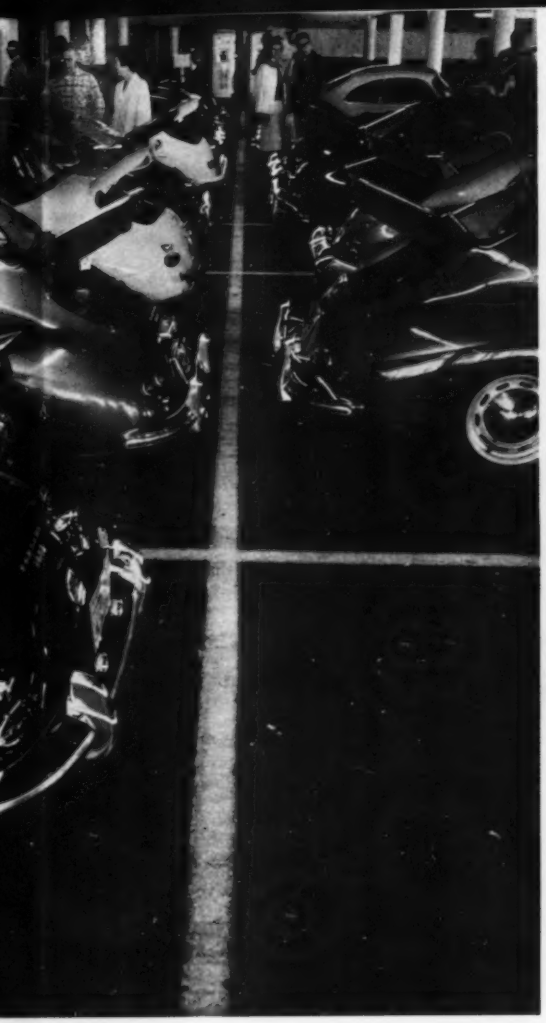
PCA cars lined up for judging

PCA's new officers, meeting together for the first time, make plans for the coming year. Left to right: Bud Blake, vice-president; Ken Button, secretary; Charles Beidler, president; Phil Liautaud, treasurer.

Bob Mustard and Syd Perlman were welcome guests at the Board of Directors Meeting in Pittsburgh. Bob and Syd are forming a Porsche Club in Montreal, Canada, which may affiliate with PCA.

Some of the "foreign" control points Region's Poor Man's Treffen.

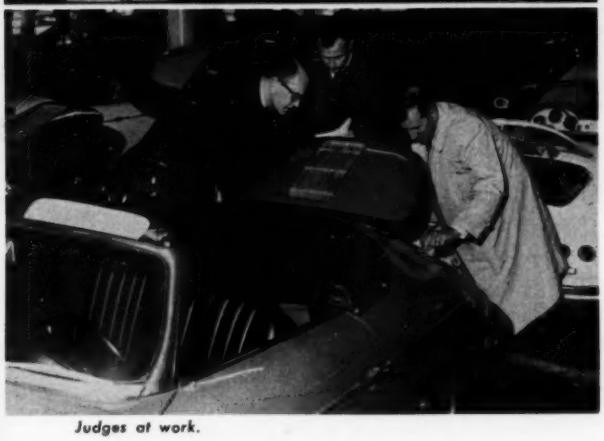
The recent Board of Directors Meeting at Pittsburgh had representatives from 15 Regions on hand.



up for judging.

Photos of OREGON Concours courtesy Union Oil Co., by Ackroyd Photography Inc.

Oregon Region Officers: H. Voremberg, Vice-president; V. Moss, Secretary; G. Wiltshire, Executive Secretary; S. Long, Treasurer; D. Stief, President.



Judges at work.

Dr. Earl Kirschbaum, right, president of PCA, presenting to Bill Sholar a citation on behalf of PCAers who participated in the third Porsche Treffen.

control points on the recent Chicago reffen.

PORSCHES AND PCAERS

As the year draws to a close, it's time to do the wrap-up on the 1960 season.

The final SCCA National Championship point standings show that Porsches and PCAers have had a terrific year.

Kudos go to our three national champions, Bob Holbert, E Modified; Roger Penske, F Modified; Bruce Jennings, C Production.

Bob and Roger were the undisputed Porsche driving virtuosos this year. Exciting, dynamic, many could be the adjectives to describe their performances. There can be no doubt that they are two of the best American Porsche drivers that have been behind the wheel of Stuttgart's hottest machines. They certainly deserve a crack at some Formula I Porsche chores. How about it, Mr. von Hanstein?

Other outstanding PCA modified class drivers were Don Sesslar, Ohio; D. D. Michelmore, California; Charlie Lyons, Colorado; Bob Donner, Colorado.

In the March issue, we crystal-balled the 1960 SCCA Production racing classes and how Porsches would fare. Let's look back and see what did happen.

Class C—We thought the Carreras might find rough going, but it turned out C was strictly a Carrera Class. Where were all the 300 SL's, Mercedes Club? PCAers Bruce Jennings and Bill Romig fought it out for the championship with Jennings winning on a driving late season finish after Romig had that unfortunate accident at Thompson. The Jennings-Romig racing sessions were sensational and loads of credit go to both boys . . . Champions. Other PCAers doing well in this class were Chandler Lawrence, Gene Hobbs, and Morrow Decker.

Class D—As we predicted, the Super 90 was an outclassed car here. Top finishing Super 90 was in 9th place. PCAer Bill Strand from Ohio was one of the fellows giving their best here.

Class E—As we foretold, this was the wildest class. We thought there might be a sleeper in this class and as it turned out, the Daimler was that sleeper. It had too much speed on the straights. John Wright, third in final standings, and PCAer Nagle Bridwell, 9th, were the hottest boys with 1600 Super Speedsters. Their best days were on short twisting courses.

Class F—Another sleeper, Diffenderfer's Siata 208S, mopped up here. Elva Couriers also were generaly bad news in this Class, especially in regional races. PCAers upholding the marque were Ray Golden and John Max Wolf, Rocky Mountain Region; Hal Zimdars, Milwaukee Region; Ron Alexander, Ohio; Ken Leith, Potomac Region. Zimdars had a nice late season winning streak coming home with the big silver five straight times, including the Elkhart Lake National.

We predicted that Porsche would perform well hillclimbing in all production classes and so they did. In the red hot Pennsylvania Hillclimb Association Hillclimbs, the season consisted of eight individual climbs this year. PCAer, Horace Ott, won by a big margin the Class E Championship with his 1600 Super Speedster. The Class F hillclimbing championship was a torrid battle between PCAers Jim Moyer, 1600N Speedster and Charlie Beidler, 1600N Coupe. One or the other won every climb, setting new records for this class every place they ran. Moyer, with a late season "Jennings" type finish, became this year's champion. Beidler had been champion in '59.

The 1961 SCCA Production Racing Classes are now out. So here we go again with predictions and comments on the classes in which Porsches will participate.

Class B

Porsche Carrera (including 1600 engine, Weber carburetors); Corvette; Ferrari 250GT (except short wheelbase); Aston Martin DB4, DB2-4.

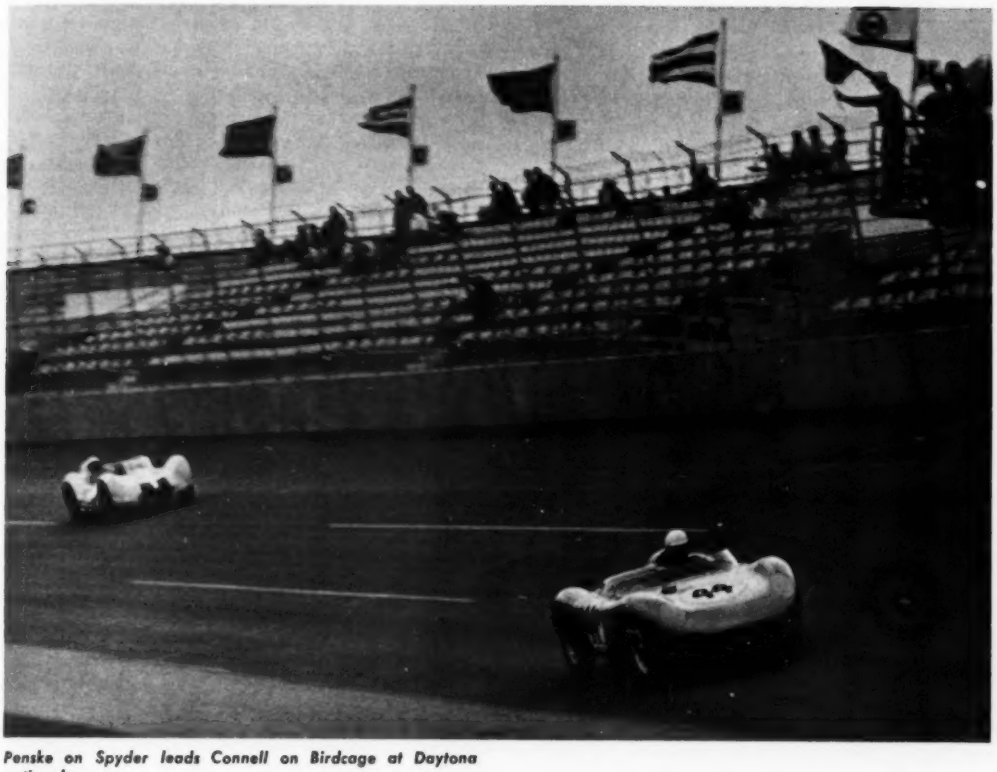
> Wow! The SCCA competition car classification committee goes way out here in placing the Carrera in this hot company. The allowing of the 1600 engine and Weber carburetors will help but our only hope will be that old twisting, short course. This will be a wild one and gears will be a secret of go. Hillclimbing will even be rough for the Carrera in this Class.

Class C

Porsche 1600 Super 90; Jaguar XK 120, 140, 150, 150S, 3.4 and 3.8; Ac Ace Bristol, Aceca Bristol; Arnolt-Bristol; Frazer-Nash; Daimler SP 250; A-H 3000 (BN7); Lotus Elite; Morgan Plus 4 (Aluminum body and competition options).

> Again we say Wow! Off past performances, the 90 seems overrated for a placing here. The SCCA committee seems to be afraid the 90 would be too much in D and it just doesn't have it against the hot stuff in this class. Even a full optional equipment Super 90 will still have that old bugaboo, weight, against it. We need a light Super 90 Speedster to have any kind of chance and unfortunately only Coupes and Roadsters are allowed.
>
> In hillclimbing, the Super 90 definitely will do better than on the road courses. A well-geared 90 should give them fits where short

IN COMPETITION



Penske on Spyder leads Connell on Birdcage at Daytona nationals.

acceleration spurts and handling are the prime requisites.

Class D

Porsche 1500S, 1600S; Alfa Romeo Veloce; Alfa Romeo 2000; AH 100, 100-6 (BN1, BN2, BN4, BN6); SIATA 208S; Turner-Climax; AC Ace, Aceca; Lancia Aurelia GT and Spyder.

With the Daimler and Mr. Black gone, it will be a 1600 Super Speedster and Alfa Veloce battle most of the time. This could be the most interesting class for PCAers in '61. Type of course and what you have for gears to suit that course will be important more than ever. Predict the wildest Speedster will be running 7:34 ring/pinion. Still can't see the 1500S being left here.

This class will be Porsche meat in hillclimbing off past experiences. If you go climbing in this class, your main competition will be another Porsche driver.

Class F

Porsche 1500, 1600; Sunbeam Alpine; Denzel 1300S; Fiat-Abarth 850S; Turner 950 Sports (Stage H); D-B Dual Super HBR 5, 850 and 950; D-B HBR 950.

Another good class to go racing with a Porsche. To be a winner, you will need a light Speedster. Sleeper here could be the Denzel 1300S and the D-B. Certain D-B's will be extra hot; seems whatever they want for options, the SCCA committee gives them with no question . . . at times it borders on being ridiculous. Watch out for a "prodified" push rod MGA here and there.

Big threat on the hills could come from the Denzel because of their light weight, otherwise Porsches should take the climbs going away.

Class G

Porsche 1300, 1300S; Alfa Romeo Giulietta; A-H Sprite with competition options; MG TF 1500; Fiat-Abarth 750 (pushrod Mille Miglia engine) Fiat Abarth 850 Allemano coupe; D-B HBR 5, 850 and 750; Berkeley B 95, B 105; Alpine (Renault); Lotus 7A; Auto Union 1000 SP; Fairthorpe Minor; Fiat 1200 Spyder.

A tough class here for the 1300 Porsches but

drift to page 18

356 B

ONE YEAR LATER

The March 1960 Issue of Pano contained our article, "Further Impressions" of the 356B. We took delivery of our "Argent Lady" on December 29th, 1960. Her engine number is P 600-211. She was a member of the first shipment of 356B's to the U. S., and those present at the 1959 Treffen probably saw her being assembled; as her engine number is just beyond theirs.

Now for One Year Later: This subject will be divided into two parts; personal experiences, and changes made in the 356B during the past year.

Under personal experiences during the past year, we list the following:

Our previous "Old Lady" had been de-cambered. At first the new "Argent Lady" seemed more sensitive to sidewinds and a little less stable in the corners. In spite of what SCCA may say about "stock," we added an EMPI camber compensator, and have been satisfied ever since. This addition makes the rear end more firm than intended, but it makes a much better handling car and we expect the rear shocks to last longer.

Around 8,000 miles, right carb coughing and poor performance led to the discovery of an apparent sticky valve guide on the number one cylinder. A little upper valve lubricant has cured this without a tear-down. The compression picture on all four cylinders has returned to normal.

The next experience could be entitled "The Bomb That Almost Blew." It still frightens me. In the process of running down the poor performance mentioned above, the gasoline filter sump under the dash was removed. It was replaced carefully, but maybe not carefully enough. We hate to think what might happen if every Porsche owner removed and inspected this item every 5000 miles as recommended in the owner's manual. Anyway, about a week later, the car spent the morning in front of a hospital, while its owner removed some anatomy from a patient. At noon, when the door was opened, about two gallons of gasoline had leaked into the interior. The matts were literally floating in gasoline. It took a week before smoking was safe in the car. We go on record as believing that at least in one way, Porsche should take a lesson from its poor cousin, the VW. Put the gas tank valve and filter on the outside underneath the car; not in the cab.

At 12,000 miles, the clutch began to slip suddenly and badly. The engine was pulled, and the only cause that could be found was too much grease behind the gland nut on the end of the flywheel. This extruded and completely ruined the clutch disk and scored the flywheel to the degree that it had to be removed and turned down. Both engine and transmission seals were intact. The pressure plate and throw-out bearing were in good condition. Somebody at the factory put too much grease behind that gland nut.

At 14,000 miles, we can honestly say that our 356B is still a very satisfactory car in every way. Her greatest virtue is her improved roadability and general handling. She has five more horses than the "Old Lady," but with her added weight she has about the same speed. She seems to "run out" quicker at the upper end than the old one. We are still waiting for an article on jet changes for better upper end performance.

We are told that the 1961 Porsche has no changes. The improvement changes have been going on constantly and here is a summary of the major ones.

1. As of December 3rd, 1959, an oil slinger has been installed between bearing #4 and the pulley wheel. This, no doubt, stops the slight oil leak about the pulley wheel our car shows.
2. As of November 13, 1959, the generator has a 200 watt output instead of 160.
3. As of November 13th, 1959, needle bearings are used on the 3rd and 4th gears.
4. As of February 25th, 1960, internally 8 mm hexagonal suspension arm link pins are installed.
5. As of February 18th, 1960, brake shoes are changed in that brake-lining carriers are pressed on to stay.
6. As of February 29th, 1960, only reinforced connecting rods are installed.
7. As of July, 1960, only the reinforced spring clutch plate is supplied.
8. As of September, 1960, only an enlarged oil pump is supplied with all engines.
9. As of October, 1960, only slow running idling jets are installed on all Super 90 carbs.
10. As of December, 1960, only improved valve guides are installed on all engines.
11. As of July, 1960, engines are equipped with improved plate spring clutches, with one end of the retaining springs secured against jumping out

drift to page 16

HANDLING 356-B?

In the November issue of the English magazine, *Motor Sport*, there appeared a short commentary on current Porsche models, to wit: "Those who are on intimate terms with the various Porsche models say that the latest models have an inferior ride and poorer road-holding than earlier models. Whether this is true or not we would not know as we are unable to obtain road test cars, but they still offer performance and all-around handling which would be difficult to beat."

Many old time PCAers still lament the passage of the Speedster from the factory production line. Having driven a 356A Coupe for years, occasionally a 356A Speedster and then for 3,000 miles a 356B Coupe, we would have to cast our vote for the 356A Speedster as the best handling production Porsche. What do you think, PCAer?

PCA CAROLINAS HOLDS FIRST EVENT

22 Porsche drivers and families attended the first meeting of PCA Carolina Region. Pictured in the beautiful Carolina sun are some of the new members watching the gymkhana. Howard Gambert who sent in the picture, regrets not including all in the photo. We hope Santa brings Howard a new wide-angle lens, and, if so, we promise to show all the members in a future issue.

drifted from page 8

1. Driving the car normally, the brakes should be used frequently but lightly for the first two hundred miles.

2. The brakes should then be used hard, giving several heavy applications from fairly high speeds until falling off in the efficiency is noted. This is the surface-conditioning process and is accompanied by a pungent smell of "hot" lining. Braking should then be continued for several applications until the fade is most noticeable and then, when the drums have cooled they should be removed and the dust blown out. The brakes should then have bedded-in.

3. It has been found that after the first period of hard use, the brakes faded almost completely, so it may be prudent to carry out this practice where loss of brakes will not cause any inconvenience to other road users. Once the car is left to cool down, first class braking is obtained.

   (From the book, "Modified Motoring," by John Sprinzel)

There is no doubt that Porsche brakes are among the finest in the automotive world. A few refinements as mentioned under linings and drums in the various articles would be welcome improvements to many PCAers.

"A Visit from Stuttgart"

'Twas the nite before Christmas and all thru the
garage,
It was clean and so spotless—It was like a mirage.

The floor had been swept with the upmost of care,
In hopes that a PORSCHE soon would be there.

Then out on the lawn there 'rose such a roar,
I raced to the front and threw open the door.

The white snow was falling and down thru the
flakes,
The winter air carried the smell of hot brakes.

And drifting a turn, as smooth as a glider,
Came jolly old Santa in a RS Spyder.

I watched as he landed and what did I see,
He was towing behind a new SUPER NINETY.

He leapt from the car and the rope he undid,
With a smile on his face, he was just like a kid.

Nick had the Porsche parked in a flash—
Then jumped in his Spyder, I heard the gears
clash!

He let out the clutch, the wheels spun on the snow,
The Spyder roared by me with tail lites aglow.

And as he went past the jolly man cried,
"Merry Christmas to all, and to all a good ride."

Burt Propp, Golden Gate Region

HARD STARTING

The question of adjusting the accelerator pumps on Zenith carburetors has come up. The question is: Should they be leaned out for this altitude in the Rocky Mountains? They can be, but at this time of year it is not too practical. Since the only way a Porsche can be started is by enrichment of the mixture via the accelerator pumps, and any decrease in the quantity of fuel injected is bound to make starting more difficult in cold weather. In the warm season they can be set to inject less gas. The proper quantity injected should be 0.2 cc to 0.3 cc for 2 strokes of the throttle. As a general rule, the lower limit for warm weather and the upper for cold weather, regardless of altitude. This could also hold true for the Solex 40 PII-4 carbs on the Super 90. Injection quantity specs for these carbs call for 0.45 cc per 2 strokes of the throttle in the warm season and 0.65 cc in the cold season.

In the past few weeks it seems the cold weather really had some Porsches with Zeniths in trouble with starting. Even fairly new ones. Usually, the trouble was not enough gas being injected by the accelerator pumps. Some had the problem of the pumps not responding to adjustment of the linkage. Upon removal of the pump plunger, it was found to be contracted considerably. This was probably from a combination of cold weather, more condensation in the fuel system and/or buying water with your gas inadvertently. These plungers are small versions of the old bicycle air plump leather plunger. Stretching them out by hand seems to do the trick. New ones are a little expensive at $4.00 each!

Vern Racek
Rocky Mountain Region

FACTORY NEWS

Porsche intends to build a proving ground to be used for experimental purposes which will incorporate a skid-pad and a small road course. They say they don't intend it for testing production cars, only experimentation.

During the Christmas season, Porsche will close out their 1960 competition at the "Grand Prix of South Africa." Joe Bonnier will drive the works—Formula II and Stirling Moss will handle the Rob Walker car.

News that Joe, "He with the beard," Bonnier will drive for Porsche in all Formula I and sports car races during 1961 is the latest flash from the factory as we go to press.

drifted from page 14

by means of a projection punched out of the counter-plate.
12. As of September, 1960, all engines are equipped with varying pitch valve springs.
13. As of September, 1960, the fuel lines between the fuel pump and also between the carbs contain flexible connections.
14. As of September, 1960, rear brake back plate ventilation is altered on those cars so equipped.
15. As of September, 1960, gear shift locks are available.

These are only a few of the changes made during the past year. For further information, consult your dealer. Most of the improvements can be incorporated on older 356B's when overhaul is carried out. It would appear that many of the above changes have been made to simplify matters at the factory. Three separate pushrod engines are being produced; the hottest of them requires improved bearings, stronger connecting rods, bigger oil pump, and stronger clutch. It is easy to add these improvements in all models for the sake of simplicity. It does not necessarily make the cars without them understressed, yet the improvements can be added at time of overhaul.

By the time a new Porsche is delivered in this country, the one leaving the factory on the same date contains many hidden improvements. It will always be this way, and we are not sorry.

"Old Doc"

ALL MEMBERS . . . PLEASE READ CAREFULLY

The Annual BILLING for DUES will be made shortly (January 1). This will be the ONLY billing made for the fiscal year 1961. Your cooperation in remitting the CORRECT amount of your dues will be appreciated.

The Billing will be made so that ALL members will be paid up through December 1961. You will each be billed for the months of 1961 that you have not paid (at $1.00 per month).

EXAMPLE: If your membership card reads "in good standing until 12/31/60" . . . you will be billed for the entire 12 months of 1961 . . . $12.00.

If your membership card reads "in good standing until 7/31/61" . . . you will be billed for the 5 months remaining in 1961 . . . $5.00.

ALL members must send dues so that they will ALL be paid up through December 31, 1961 . . . (whether you owe $12.00 or only $1.00).

Dues for ACTIVE and ASSOCIATE members are $12.00 per year.

Dues for FAMILY members are $6.00 per year.

If your membership status has changed during the year please so indicate in the space provided on the invoice.

DEADLINE: The deadline for receipt of dues at headquarters is February 15, 1961.

Members who have not paid dues by February 15, 1961 will be dropped from the rolls.

If we do not have your CORRECT address and the invoice does not reach you . . . this will NOT be accepted as an excuse for failure to pay dues before the deadline.

PLEASE COOPERATE: DUES are DUE and payable JANUARY 1, 1961.

NEW ADDRESS USE NOW

PORSCHE CLUB OF AMERICA
EXECUTIVE OFFICE
P. O. Box 3025
Alexandria, Virginia
U. S. A.

TEN IN A NINETY

On June 29th, shortly before the Porsche Parade, we acquired a Royal Blue Super 90 Coupe which has now exceeded 10,000 miles. Other than the usual nicks and scratches from shipping, the body-work, inside and out, checked out O.K.

The first problem was poor low-speed operation and idling. This was corrected quite well at our altitude (800 ft.) but it showed up again at the Aspen altitude of 7,000 ft. As our stay there was only five days, we simply speeded up the idling and made the best of it. We had no mechanical bothers on the trip out, during our stay or on the way home. What slowed us up most was a persistent highway patrolman in Nebraska.

The vent windows on the Coupe are entirely inadequate, as one trip across the blistering prairies will quickly prove. Even the little tulip valves, formerly on the firewall have been left out. These were only slightly better than nothing, but they did help. WINTER PROJECT — install cowl ventilator.

After experience with three cars (new), I can only say that the quality of the tachometer and speedometer is abominable. In each case, I have had trouble with one or the other or both. The tachometer needle on this car started to rattle and bounce at about 8,000 miles.

The Dunlop rigid breaker tires, at recommended pressure, along with the Camber Compensator give excellent cornering power on paving—wet or dry. Snow and ice have not been encountered as yet. We have noticed on gravel corners there is a tendency to roll sidewise. There is practically no shoulder on the tread—the corner on the tread on most tires simply isn't there—to bite in.

We're still running the original Bosch W-225 T 1 plugs, having cleaned them only three times. This surprises me, too, as I had anticipated more frequent plug cleaning. It is necessary to burn premium gas—regular "pings."

As soon as the guarantee was out, the "S" bend exhaust pipes were removed and the stacks run straight out and down.

I have not been able to get under 18 seconds on the local drag strip, but then, I weigh over 200 pounds; perhaps a 120-pound driver could do better. In getting out of the "chute" the Dunlops will not spin and the clutch will not slip. It is necessary to feather the clutch in just right or the engine is pulled down to an unfavorable speed and you lose time.

All in all, we are not sorry we bought a Ninety. My wife can drive it to the super market with no more fuss than driving a Normal. Although Herr Dramm says it should be used only in competition, we noticed a handy little mirror built in to the sun visor on the passenger's side—so, what is this for???

W. F. Woolery
Nord Stern Region

SUSIE SWINGS!

Last summer when my Dad decided to sell his roll bar, he tied it to the rear of his Porsche and took it to Wilmot Hills in hopes of selling it. Just for fun, I took a snapshot of it, and here is the result.

Being a teen-ager, I have appropriately entitled it "Rock and Roll" bar!

Susan Wanger
Glencoe, Illinois

P. S. My parents belong to the Chicago Region.

drifted from page 13

much better than when they were shoved into Class F. Weight rears its problem as only steel Coupes and Cabriolets are eligible to compete . . . reason is that 1300 Speedsters were never available as production items. Class looks like a toss-up generally, with 90 HP Alfa Giuliettas holding the favorite spot at the moment . . . everything is a sleeper.

Should be a terrific class for hillclimbing 1300S Porsches where their overall superior handling and lower end torque will pay big dividends.

Since the interest of Porsche people can't help but be spiced by the sight of seeing production Porsches racing in five different classes next season, a thought comes to mind. Wouldn't it be a nice gesture for POAC and the particular Porsche distributor where a national race occurs, to have a service representative and some parts present to help, advise and encourage the boys? By this, we mean not only the Spyder and Carrera fellows, but also the little production Super 90, Super and Normal guys that carry the battle against other everyday bread and butter sports cars. What do you think, Porsche Factory, POAC, Porsche distributors and dealers? We invite your support and encourage your comments on this subject. We hope that Pano will be hearing from you.

IN THE BERKSHIRES

VIP PARADE

JUNE 26-30

PARADE PREPARATION

The Sixth Annual Porsche Parade committee recently visited and reserved Jug End Barn at South Egremont, Massachusetts, in the heart of the Berkshires, for the site of next year's Parade, June 26 through June 30, 1961.

Your host, the Northeast Region, is putting the emphasis on social activities, comfort, good food, relaxation and pure vacation enjoyment at the Sixth Parade.

The Jug End Barn vacation resort is in extreme southwestern Massachusetts near the junction of the New York Thruway and the Massachusetts Turnpike. It is within a few miles of the Lime Rock Race Track, site of the National SCCA Races, and PCA will have the exclusive use of the track for two days for gymkhanas, drivers' school, and trials.

Keep watching each month for more news about all the wonderful recreational activities planned for your next Parade.

Burt Edwards
Northeast Region

HIRTHING WITH THE FACTORY

I read with great interest the article by Mr. Edgar I. Broadhead, Jr. about conversion of Hirth crankshafts to aluminum sleeve bearings in your October 1960 issue.

We have done considerable work with such aluminum sleeve bearings on closed big end connecting rods. We found it advantageous not to crush fit these bearings in the connecting rods but to give them some clearance, approximately .001" to .002". At the same time the clearance on the shaft can be reduced and the sleeve bearing floats. It is further necessary to drill small holes into the sleeve bearings in order to get lubrication between the bushing and the connecting rod. Such a layout has proved more satisfactory than the pressed in sleeve bearings.

Hoping this will interest Mr. Broadhead, I am

Sincerely yours,

Dr. Ing.h.c.F. Porsche KG
(N. von Rucker) Chief Engineer

HAPPY BIRTHDAY, MR. RABE

Belated PCA birthday good wishes go to the Porsche Factory's Chief Engineer and Vice President, Mr. Karl Rabe.

Mr. Rabe was the oldest collaborator of Professor Porsche, having joined him at the Austro Daimler works in 1913. In 1939, he entered the newly established engineering office of Professor Porsche.

The so-called Auto Union-P-Racing car is the most famous of his numerous designs.

After World War II, Mr. Rabe became the official administrator of the Porsche factory in Gmuend-Karnten, and on the death of the Professor, he became Vice President of the Porsche-Works at Stuttgart.

Mr. Rabe has been married since 1927 and has three sons. His favorite hobbies are to play the piano, to read medical literature, and to listen to classical music.

PANO MAKES CHANGES

With this issue we end three very enjoyable years of active editorship of your magazine. Starting with the January issue, the new editor of Panorama will be T. Kendall Twigg of the Potomac Region. Ken has many new and refreshing ideas in store for your reading. We hope to be able to help Ken from a technical angle in future Panoramas.

I would like to sincerely thank everyone who has taken the time to write material for Pano.

Charlie Beidler

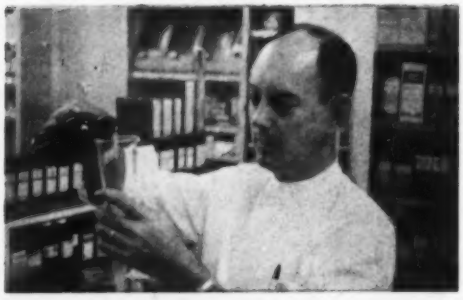
PHOTO CREDITS

Thanks to Susan Wanger, Don Comunale, the Porsche Factory, Charles J. Wick, Ackroyd Photography, Inc., Ken Twigg for photos for this issue of Panorama. Cover by Bill Sholar.

NEW!

SEE PAGE 17

PCA PERSONALITY



Ken Twigg

T. Kendall, shown pouring a big shot, was born in Cumberland, Maryland some 40 years ago.

He worked his way through George Washington University School of Pharmacy and after graduation, worked as a pharmacist and pharmaceutical salesman. For the past eight years, Ken has operated his own prescription pharmacy in Mt. Rainier, Maryland.

For 17 years Ken has been married to a girl named Marguerite. Out of this union has come two children, Carol Ann and John.

Ken's principal hobbies are playing and studying organ, chess and photography.

Ken helped form PCA . . . he was at the first organizational meeting and became the first Secretary-Treasurer of PCA. He has been Chairman of the Finance Committee for two years, served on the Board of Directors as Nominating Chairman for four years and has been a tower of strength in the Potomac Region.

The Twigg Porsche is now a '59 Cabriolet, the third Porsche that has found a home in their garage.

It's with a great deal of pleasure we introduce you to Ken Twigg, the new editor of Panorama.

FOR SALE

'59 Super Coupe, black with red interior. Radio, seat belts, mats. Only 8,000 miles and in concours condition. $3250.

'59 Normal Coupe, blue with tan interior. Chrome rims, side strips, clock, luggage rack. Excellent condition at 18,000 miles. $2685. Bill Nixon, Rt. No. 1, Box 109, Onalaska, Wis.

'57 Coupe, Normal, wrecked (in left front, not too badly) at 20,000 miles. Write for details to Forest L. Riley, Jr., 213 E. Indianola Ave., Youngstown, Ohio.

'59 Super Convert "D," perfect condition, never raced, less than 8,500 miles, silver, red interior. Tonneau cover, Top boot and seat covers. $3,195.00, pictures on request. T. M. Barutio, 5 Highgate Rd., Clayton 32, Mo.

Parts for 1600S engine
1. Camshaft, has been completely x-rayed. You get the pictures when you purchase the cam.
2. One only, cylinder-piston assembly with rings, etc. Slight wear near top of cylinder on one side. Make offers. Paul R. Heinmiller, 323 Oakridge Drive, Schenectady 6, N. Y.

Two brand new 32NDIX Zenith carburetors and manifolds, complete with carburetor-manifold gaskets and fuel lines. Carburetors are set up for a Normal but can be easily converted to Super specs. Were to be used on "Cal Club Type" Normal but Mom needs new shoes. Charles D. Beidler, Jr., Box 131, Langhorne, Pa.

'59 Super Cabriolet, Blaupunkt radio, Michelins, priced reasonably. Hate to part with it, but I am forced to go on the road for Standard-Triumph for economic reasons. Peter Davies, c/o Lennen & Newell, 380 Madison Ave., New York City, N. Y.

Ed. Note: *Our hearts go out to you, Peter.*

WANTED

Used 1600S engine, less carbs, coil-condenser, generator. "Blew" mine racing and need replacement to stay running. Please state condition and price. Robert W. Kerckhoff, 5550 N.E. 20th Terrace, Fort Lauderdale, Florida.

Ed. Note: *Go get 'em, Bob, old tiger!*

1. Glaspar Hardtop in good condition for Porsche Speedster.

2. Rear seat luggage platform with accessories in imitation red leather from Coupe or Cabriolet. Louis Axtman, 1 Des Peres Ave., Framingham, Mass.

One Porsche type 550 Spyder. Not necessarily the immaculate type that are selling for $3500, but one that would sell for about one-third of this price or less. One that is sort of race weary and the present owner would like to see get a good home rather than get large monetary return for. While I have nothing against one that runs, that feature would probably make it too expensive. What I want doesn't have to have a motor (I can use my Super push rod motor) or wheels or anything that's real valuable. As long as the frame isn't too badly mashed and the body looks a little better than an old piece of Reynolds wrap, and whoever owns it wants less than it's worth, I'd be interested. Charles Wolff, Hook Road, RD 2, Victor, New York.

Ed. Note: *Me, too, Chas.!*